

the pronotum visible medially; scutellum large, as broad as the mesonotum, the basal suture not impressed nor foveate. Propodeum very short, twice as high as long, its spines curve backwards, with the median one set somewhat forward of the lateral ones. Pro- and mesopleuræ smooth and polished; metapleura and sides of propodeum rugose, with several more or less regular oblique carinæ extending downwards and backwards. Petiole finely longitudinally rugose-striate, narrower at base and apex. Gaster about three times as broad as the head or thorax. The hairs on the body are denser on the petiole, propodeum and base of abdomen, and entirely absent on the pro- and mesopleuræ. Tarsal claws stout, simple; tibial spurs minute; hairs on femora very sparse, those of the tibiæ conspicuous.

Type from Dun Mountain, New Zealand, at an altitude of 2000 feet, March 15, 1921 (A. Philpott).

THE EUROPEAN HOUSE CRICKET; HEARTH CRICKET.

BY A. P. MORSE, Peabody Museum of Salem.

This cricket, in the winter of 1920, became a nuisance in a dwelling at Swampscott, Mass., damaging clothing in the basement laundry and annoying by its persistent chirping (recorded in my manual of N. E. Orth., p. 393), but shortly after disappeared and is not now found there.

On Oct. 16, 1922, I captured an adult male in an open pasture at Marblehead, Mass., several miles away. No others were seen. Curiously enough, in connection with the fireside association of the species, tho probably without definite significance, this specimen was found hiding under a fragment of partly burned board lying on the charcoal of an old bon-fire site.

NOTES ON *LIVIA MACULIPENNIS* (FITCH) (HOMOPTERA; CHERMIDÆ)

BY HARRY B. WEISS AND ERDMAN WEST

Highland Park, N. J.

This jumping plant louse which is recorded by Van Duzee¹, as occurring in Quebec, New Hampshire, New York, Massachusetts, New Jersey, Pennsylvania, District of Columbia and Alabama has been known for some time to be associated with the elongate gall on rush (*Juncus* sp.), the floral parts being aborted, the bracts of the inflorescence increasing to many times their normal size and forming closely imbricated clusters from 3 to 4 cm., in length. For several years this species has been noted at Monmouth Junction, N. J., and the following notes have been accumulated.

The adult overwinters and appears during the middle and last of May. The oval, lemon-yellow eggs are deposited in rows on the inflorescence and bracts, each egg being fastened on the plant tissue by means of a short, backward projecting, basal stipe. A few eggs were found as late as June 17 after the galls were fully developed and these occurred on the inner surface of the lowest bract. After hatching the nymphs make their way to between the folded leaf-like parts, most of them feeding head downward between the sheaths. By the last week of June many are fully developed and the first adults emerge several days later. Most of the nymphs inhabit the outer sheaths and only a few are found in the tightly rolled inner sheaths. Some galls were found to contain from 25 to 100 nymphs. Those with fifty or more were quite swollen. The larger nymphs have the ends of their abdomens clothed loosely in waxy threads. As a rule nearly all nymphal stages can be found in a gall during the last of June, with the possible exceptions of newly hatched ones. Based on size and structure, the nymphs were easily arranged into five stages and the following descriptions indicate the development which takes place from egg to adult.

¹Van Duzee, Cat. Hemip. Amer. North of Mexico.